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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,232	10/19/2000	Oscar E. Agazzi	36979/FLC/B600	8577
23363	7590	02/05/2004	EXAMINER	
CHRISTIE, PARKER & HALE, LLP 350 WEST COLORADO BOULEVARD SUITE 500 PASADENA, CA 91105			TSEGAYE, SABA	
			ART UNIT	PAPER NUMBER
			2662	4

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/693,232

Applicant(s)

AGAZZI ET AL.

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 5-12, 17-24 and 29-35 are rejected under 35 U.S.C. 102(b) as being anticipated by I'Anson et al. (US 5,347,524).

Regarding claims 5, 9, 17, 21, 29 and 33 I'Anson discloses, in Fig. 4, a data processing system (10) adapted to diagnose an adaptive system operably coupled to external systems wherein the adaptive system is controlled by a state machine comprising:

a processor (17); and

a memory (18) operable coupled to the processor (17) and having program instructions stored therein, the processor (17) being operable to execute the program instructions, the program instructions including:

reading a plurality of expected state machine sequences (column 6, lines 48-61; column 7, lines 52-64);

recording a state machine sequence from the state machine (column 6, line 62-column 7, line 10);

selecting from the plurality of expected state machine sequences a selected expected state machine sequence that matches the state machine sequence (column 7, lines 11-22); and

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determining the status of the adaptive system based on the selected expected state machine sequence(column 7, lines 23-30).

Regarding claims 6, 10, 18, 22, 30 and 34 , I'Anson discloses the method wherein the plurality of expected state machine sequences are normalized based on a sample frequency of the state machine sequence (column 7, lines 19-21).

Regarding claims 7, 12, 19, 23, 31 and 35, I'Anson discloses the method wherein an approximate string matching algorithm is used to match the selected expected state machine sequence and the state machine sequence (column 7, lines 11-14).

Regarding claims 8, 20 and 32, I'Anson discloses the method wherein determining the status of the adaptive system further includes:

obtaining adaptive data from the adaptive system (column 6, lines 48-61); and

determining the status of the external systems using the adaptive data (column 7, lines 11-14).

Regarding claims 11 and 24, I'Anson discloses the method wherein the state machine sequence is recorded by the state machine (column 7, lines 19-21).

3. Claims 4, 16 and 28 rejected under 35 U.S.C. 102(b) as being anticipated by Goodson et al. (US 5,636,244).

Goodson discloses, in Figs. 2, 6, 7, a method for determining the quality of a communications channel operably coupled to a communications transceiver containing an adaptive filters, comprising:

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a processor (107); and

a memory operably coupled to the processor and having program instructions stored therein, the processor being operable to execute the program instructions (column 3, lines 47-60), the program instructions including;

reading a plurality of filter coefficients from <sup>m</sup>the adaptive filters (column 5, lines 14-20);

calculating a communications channel pulse response using the plurality of filter coefficients (column 5, lines 14-65);

calculating a communications channel frequency response using the communications channel pulse response and applying an inverse Fourier transform (column 6, lines 35-50);

calculating a communications channel transfer function by dividing the communications channel frequency response by a Fourier transform of a transmitted pulse (column 6, line 35-column 7, line 10); and

comparing the communications channel transfer function to a standard communications channel transfer function (column 7, lines 12-60).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 13 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over I'Anson in view of Szechenyi (US 4,547,633).

I'Anson discloses all the claim limitations as stated above, except for: reading a plurality filter coefficients, calculating the quality of the communications channel using the plurality of filter coefficients and diagnosing faults based on the plurality of filter coefficients.

Szechenyi teaches a method and circuit for locating faults in a digital telecommunication subscriber termination by comparing coefficients determined during a fault with coefficients determined when the subscriber termination is operating faultlessly.

It would have been obvious to one ordinary skill in the art at the time the invention was made to add a method that calculates the quality of the communications channel using the plurality of filter coefficients, such as that suggested by Szechenyi, in the method of I'Anson in order to localize the location of fault by way of comparing the continuous coefficients with the stored coefficients.

6. Claims 2, 3, 14, 15, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over I'Anson in view of Szechenyi as applied to claims 1, 13 and 25 above, and further in view of Goodson et al.

I'Anson in view of Szechenyi discloses all the claim limitations as stated above, except for a Fourier transform and inverse Fourier transform.

Goodson teaches that Fourier Transform is utilized to convert a received training signal to a frequency domain and inverse Fourier transform is utilized to convert an inverse channel

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frequency characteristic to the finite impulse response characteristic of the inverse frequency response of the channel.

It would have been obvious to one ordinary skill in the art at the time the invention was made to apply a Fourier transform and inverse Fourier transform in the method of I'Anson in view of Szechenyi in order to convert the sampled signal to the frequency domain and vice versa.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zuranski et al. (US 6,445,733) discloses a method of and apparatus for performing line characterization in a non-idle mode in a subscriber line communication system .

Williams (US 5,990,687) discloses a system for determining if there is a break in the shield of coaxial cable plant by inducing a reference test signal onto the sheath or outer conductor conductor of a coaxial cable.

Amino et al. (US 4,951,269) discloses an echo canceller with short processing delay and decreased multiplication number.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

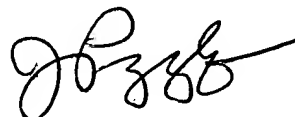
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST

January 30, 2004

A handwritten signature in black ink, appearing to read 'J. Pezzlo', with a stylized flourish at the end.

**JOHN PEZZLO**  
**PRIMARY EXAMINER**